TACTICAL EXPLOSIVES SAFETY

Executive Safety Board

Safety Managers Brief

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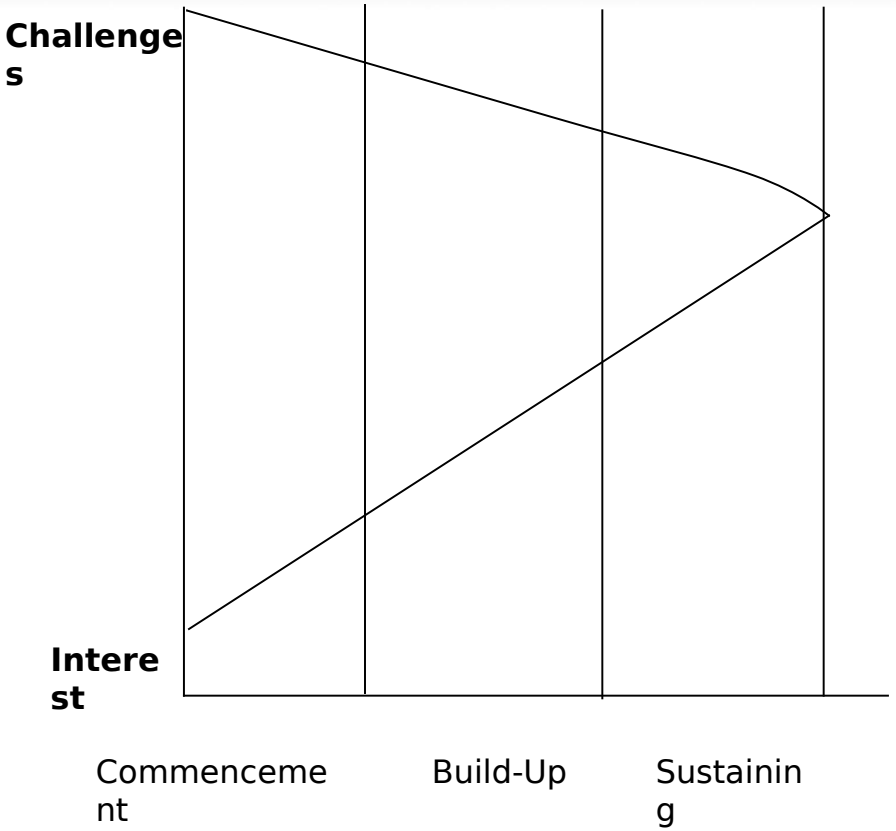
Explosives Safety Challenges

- **Initial Explosives Safety Challenges**
  - **Unit Storage**
  - **Amnesty Program**
  - **CEA Storage**
  - **Encroachment**
  - **Unserviceable Ammunition**
  - **Accountability**
  - **Security of High Risk Explosives**
  - **Explosives Safety Support**
  - **Complacency**
  - **Airfields**
  - **Site Planning**



Tactical Explosives Safety Phases

Commencement	Force Build Up	Sustaining Operations
Minimal thought to explosives safety	Locating Explosives sites on Bases	Master plans adjusted to meet explosives safety requirements
No advanced planning	Lack of initial planning becomes evident	Permanent Explosives Safety Personnel needed
No explosives safety expertise	Joint/NATO issues arise	Coordination with tenants required
Limited explosives safety principles being applied	Requests for explosives safety assistance	Construction Costs Increase to correct deficiencies

Explosives Operating Locations

- Explosives Operating Areas
  - Theatre Ammunition Supply Points
  - Airfields
    - Combat Aircraft Loading Areas
    - Hazardous Cargo loads/offloads
    - Aviation Life Support Shops/Seat Shops
  - Explosive Ordnance Disposal
  - Captured Enemy Ammunition
  - Basic Load Ammunition Holding Areas (BLAHA)
  - Missile Batteries
  - Demil Sites
  - Military Working Dogs
- Explosives Safety in Combat Operating Locations is much more complex than in a Garrison environment

Regulations

- Explosives Safety regulations are more complex in a combat environment
- Garrison activities predominately use:
  - Department of Defense Standards
  - Marine Corps Orders
  - Department of the Navy Instructions
- In combat, need to consider the above and the following:
  - Other services
  - Other countries
  - Joint Instructions
  - NATO Standards
  - Chairman Joint Chiefs of Staff Instructions (CJCSI)

Garrison

- [illegible]
- Experienced Explosives Safety Officers (ESO)
- Well defined standards
- Sterile environments
- Emphasis placed on safety

VS

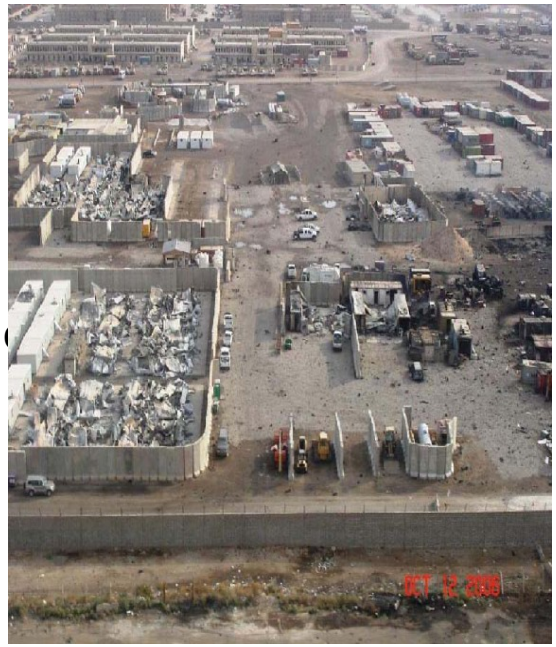
Combat

- N[illegible]ed TS[illegible]
- Standards vary
- Constantly changing Combat environment
- Mission accomplishment top priority

The Commander in the field should have an ESO of equal or greater explosives safety expertise as the Commander of a garrison installation!

Mishaps

- Explosives Mishaps in combat
  - Most negligent discharges
  - Few explosives mishaps
  - Low fatalities/high equipment
- The lack of severe explosives mishaps likely attributed to
  - US munitions manufactured to a high degree of safety and reliability
  - US munitions have a rigorous testing and certification process (WSESRB)
  - HERO Testing
- One explosives incident could dwarf all other incidents combined!!!



Theatre Mishaps

Doha July 1991

MOSUL May 2003

Kirkuk June 2004

FOB Falcon Oct 2006

Mishap Mitigation

- A trained TESO would limit the severity of a mishap caused by;
  - Enemy Fire (Indirect fire)
  - Condition of Ammunition (unpackaged explosives)
  - Captured Enemy Ammunition (unfamiliar explosives in unknown conditions)
  - Increased Exposure to Explosives
  - Complacency with Explosives
  - Inexperienced Personnel Overseeing Explosives operations

Tactical Explosives Safety Support

- Technical Explosives Safety expertise
- Provide Explosives Site Planning Support
- Development of Explosives Safety Policies
- Familiar with NATO and Joint requirements
- Risk Mitigation
- Ammunition and Explosives Storage Construction
- HERO
- Perform Explosives Safety Inspections
- Explosives Safety Training
- Non Standard ammunition

Operational Planning

- Explosives Safety Management (ESM) should be integrated into all phases of contingencies, warfighting, and training
  - Will be a requirement in the new CJSI
  - Part of new PM Ammunition Order
- Prior planning will address potential probabilities and consequences of explosives mishaps
- The goal of Operational Planning is to
  - Lessen/Mitigate the explosives risk
  - Minimize potential loss (Asset preservation)
- Explosives risks are more easily controlled when they are identified early in the planning process
- **Explosives Safety support has been requested by all deploying MEFS since 2005**

Tactical Explosives Safety Tools and Training

- ESO Certification Program
- Operational Risk Assessment tools (ASAP-X)
- Defense Ammunition Center Courses
- Automated Site Planning
- Mentoring by EES Staff
- Currently Available:
  - Repository for all TAV results/lessons learned
  - Evaluation guide for operational explosives safety
  - Captured Enemy Ammunition Policy for MCO P8020.10B
  - Direct assistance from EES Team

Future Challenges

- ***Planning***
  - Integrating explosives safety planning into current Operational Plan Annexes and Appendices (will be mandated by future CJCSI)
- ***Training***
  - Training a core group of Tactical Explosives Safety Professionals for the tactical environment (0017?)
  - Developing training in areas that are deficient (DDESB Explosives Safety Training Working Group)
- ***Location of Tactical Explosives Safety Officers***
  - Organizationally place an ESO at appropriate levels (MEF/MAW/MLG/Div)
- ***Development of Tactical Explosives Safety Tools***
  - Should not be complex
  - User friendly

SUMMARY

- A Tactical Explosives Safety (TES) program is vital for safety of explosives in combat environments
- Explosives safety should be the primary responsibility of the individual
- TESO should be imbedded with the MEFs so they can ensure explosives safety is part of the planning process
- DoD mandated requirement for Tactical Explosives Safety is coming

WAY AHEAD

- Assign a limited number of Tactical Safety Specialists the primary duty of Tactical Explosives Safety (0017).
- The EES Team, PM Ammo, MARCORSYSCOM, will assist with the training

QUESTIONS?